



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/586,557	09/14/2006	Morten Dahl	502424.117549	5741
29540	7590	03/17/2010	EXAMINER	
DAY PITNEY LLP			MAI, TIEN HUNG	
7 TIMES SQUARE			ART UNIT	
NEW YORK, NY 10036-7311			PAPER NUMBER	
			2836	
			NOTIFICATION DATE	
			DELIVERY MODE	
			03/17/2010	
			ELECTRONIC	

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ladams@daypitney.com  
rschneider@daypitney.com  
tbomzer@daypitney.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/586,557	<b>Applicant(s)</b> DAHL ET AL.	
	<b>Examiner</b> TIEN MAI	<b>Art Unit</b> 2836	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 14 January 2010.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) 1-9 and 18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 10-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                    | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)         | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                          |

Art Unit: 2836

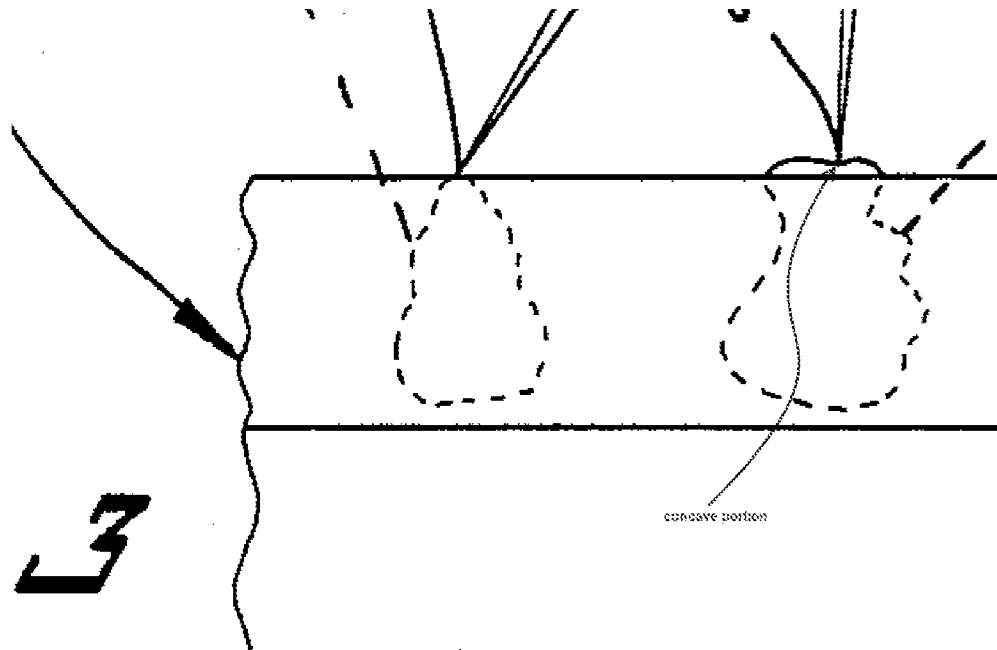
### DETAILED ACTION

1. Applicant's response of 01/14/2010 has been entered and considered. Upon entering amendment, claim 10 has been amended; claim objections have been withdrawn.

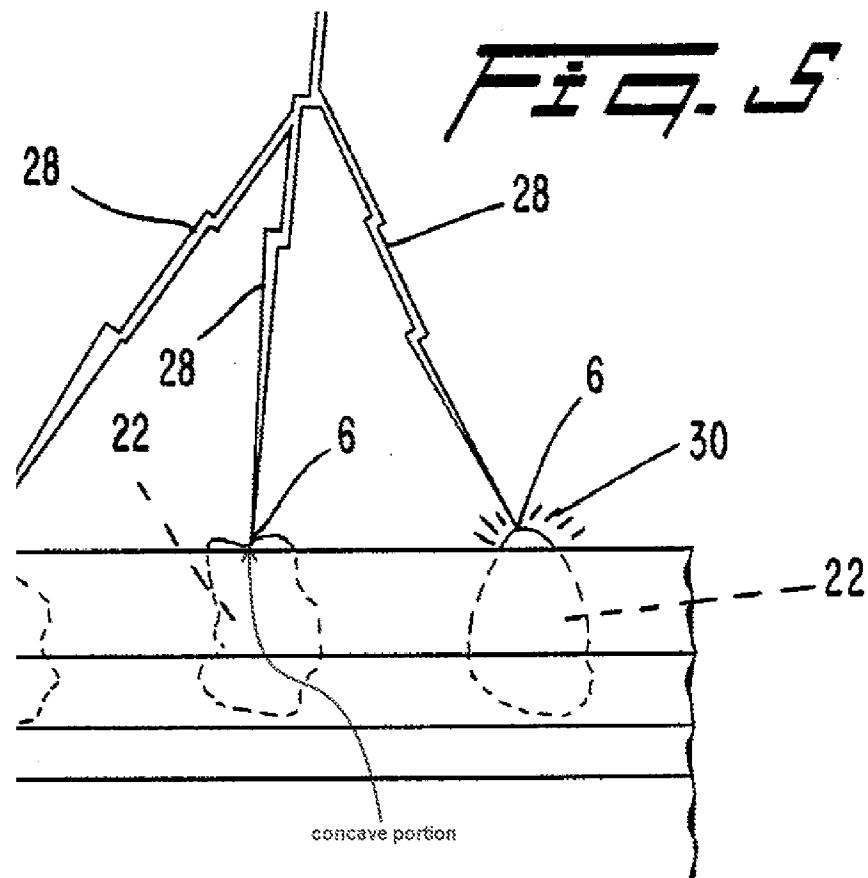
### *Response to Arguments*

2. Applicant's arguments filed 01/14/2010 have been fully considered but they are not persuasive for the reasons discussed below.

3. According to Dictionary.com defines concave as "having at least one interior angle greater than 180°"; therefore, at least exposed part of the isolated segment of Brick are concave shape. See figures below.



Art Unit: 2836



4. Applicant argues that the exposed part of each of Brick's isolated segments is not concave when seen from a top view. While it is true that when seen from a top view the exposed part of the isolated segment is not concave; however, as shown in Figs. 3 and 5, the exposed parts of each of the isolated segment are concave when seen from a side view.

5. Applicant also argues that Cline teaches away from the claimed invention because Cline's plates and buttons are not concave shaped. According to MPEP 2145 (X) (D), proposed modification cannot render the prior art unsatisfactory for its intended purpose or change the principle of operation of a reference. Especially, Cline does not teach modification of the shape, i.e., changing in shape from plated/buttons or diamond

Art Unit: 2836

to concave, will destroy the principle of operation of the lightning diverter strip. Therefore, the Examiner's modification suggestion is proper.

6. Applicant finally argues that the combination of Cline in view of Brick is not obvious. The Examiner respectfully disagrees because since both Cline reference (patented in 1985) and Brick reference (patented in 1989) teach lightning diverter; therefore, one ordinary skill in the art would combine the references to meet his objectives. According to Supreme Court decisions, *KSR International Co. v. Teleflex Inc.*, applying a known technique to a known device ready for improvement to yield predictable results. The claim would have been obvious because a particular known technique was recognized as part of the ordinary capabilities of one skilled in the art. *Dann v. Johnston*, 425 US 219, 189 USPQ 257 (1976). The claim would have been obvious because a person of ordinary skill in the art would have been motivated to combine the prior art to achieve the claimed invention and that there would have been a reasonable expectation of success. *In re Kahn*, 441 F.3d 977, 988, 78 USPQ2d 1329, 1336 (Fed. Cir. 2006). Additionally, the choice of one over the other, i.e., diamond or concave shapes, is an engineering design choice based upon available of parts and design requirements. The claim would have been obvious because “a person of ordinary skill has good reason to pursue the known options within his or her technical grasp. If this leads to the anticipated success, it is likely the product not of innovation but of ordinary skill and common sense.” *Pfizer, Inc. v. Apotex, Inc.*, 480 F.3d 1348, 82 USPQ2d 1321 (Fed. Cir. 2007).

7. For the reasons discussed above, the rejections are maintained.

***Claim Rejections - 35 USC § 102***

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 10 and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Brick (US 4,824,713, "Brick").

10. **Regarding claim 10**, Brick discloses lightning protected structural surface, the apparatus (figs. 3 and 5) comprising: a layer of electrically non-conductive material (17) with a plurality of isolated segments of electrically conductive material (22), wherein exposed parts of said isolated segments are concave shape. Please note that for simplicity Brick only illustrates the exposed part of one of the isolated segments is concave shape; however, plurality of isolated segments, i.e., tens, hundreds or even thousands, distributed on a surface of aircraft. Thus, some of the exposed parts of said isolated segment are concave shapes.

11. **Regarding claim 17**, Brick discloses that the electrically non-conductive material being preferably made of an adhesive (col. 3, lines 43-45).

***Claim Rejections - 35 USC § 103***

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 2836

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. Claims 10-14, 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cline (US 4,506,311, "Cline") in view of Brick.

14. **Regarding claim 10**, Cline discloses lightning diverter strip with diamond-shaped conducting segments, the apparatus (fig. 1-3) comprising: a layer of electrically non-conductive material (12) with a plurality of isolated segments of electrically conductive material (15) having a diamond shape.

15. Cline does not explicitly disclose exposed parts of said isolated segments are in concave shapes. In the same field of endeavor, Brick discloses a plurality of isolated segments of electrically conductive material (22), wherein exposed parts of the isolated segments are concave shapes (see figs. 3 and 5). Please note that for simplicity Brick only illustrates the exposed part of one of the isolated segments is concave shape; however, plurality of isolated segments, i.e., tens, hundreds or even thousands, distributed on a surface of aircraft. Thus, some of the exposed parts of said isolated segment are concave shapes.

16. This is viewed to be changed in shape, which is dependent upon the operating condition and design requirements. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to choose the isolated segments to be concave shape, since it has been held that mere changing shape of the essential working parts of a device involves only routine skill in the art. *In re Dailey*, 357 F.2d 669, 149 USPQ 47 (CCPA 1966).

Art Unit: 2836

17. The choice of one over the other, i.e., diamond or concave shapes, is an engineering design choice based upon available of parts and design requirements. The claim would have been obvious because “a person of ordinary skill has good reason to pursue the known options within his or her technical grasp. If this leads to the anticipated success, it is likely the product not of innovation but of ordinary skill and common sense.” *Pfizer, Inc. v. Apotex, Inc.*, 480 F.3d 1348, 82 USPQ2d 1321 (Fed. Cir. 2007).

18. **Regarding claim 11**, Cline discloses the diverter being in the shape of a strip (see fig. 1).

19. **Regarding claims 12 and 13**, Cline and Brick disclose the limitations as discussed above. Neither Cline nor Brick discloses the isolated segments having different shapes, i.e., cross or star shape. This is viewed to be changed in shape, which is dependent upon the operating condition and design requirements. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to choose the isolated segments to be concave shape, since it has been held that mere changing shape of the essential working parts of a device involves only routine skill in the art. *In re Dailey*, 357 F.2d 669, 149 USPQ 47 (CCPA 1966).

20. **Regarding claim 14**, Cline discloses the diverter having a layer of material (28) increasing the stiffness of the diverter in the direction along the strip (see fig. 3).

21. **Regarding claim 16**, Cline discloses that the isolated segments preferably makes of metal (col. 2, line 60 – col. 3, line 2).



Art Unit: 2836

22. **Regarding claim 17**, Cline discloses that the electrically non-conductive material being preferably made of an adhesive (col. 3, lines 19-24).

23. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cline in view of Brick, and further in view of Bocherens (US 5,841,066, "Bocherens").

24. **Regarding claim 15**, Cline and Brick disclose the limitations as discussed above. Neither Cline nor Brick discloses the diverter comprising an outermost layer of double-sided adhesive tape. Bocherens discloses a lightning strip having self-adhesive type, i.e., double-side adhesive type, which one side sticks onto the lightning strip and the other side adheres onto application to be protected, i.e., radomes (col. 3, lines 55-60). It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the device of Cline in view of Brick to include a self-adhesive tape, as taught by Bocherens, in order to replace and its maintenance is easier than other type of fastening (col. 3, lines 55-60).

### ***Conclusion***

25. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

Art Unit: 2836

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TIEN MAI whose telephone number is 571-270-1277. The examiner can normally be reached on M-Th: 8:00-7:00. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jared Fureman can be reached on 571-272-2391. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

/Tien Mai/  
Examiner, Art Unit 2836

3-12-10

/Stephen W Jackson/  
Primary Examiner, Art Unit 2836